1. INTRODUCTION

The Ecology and Environment, Inc. Field Investigation Team (FIT) was tasked by the U.S. Environmental Protection Agency (EPA) under Technical Directive Document (TDD) F06-9001-13 to conduct the Screening Site Inspection (SSI) Reassessment of the Goodson and Son Trucking facility in Channelview, Harris County, Texas.

1.1 SCREENING SITE INSPECTION OBJECTIVES

The SSI evaluates the potential risks associated with hazardous waste, generation, storage and disposal at the site. It expands upon data collected during the Preliminary Assessment (PA) and identifies data gaps. Information obtained during the SSI supports the management decision of whether the site proceeds to the Listing Site Inspection (LSI) or receives the classification of No Further Action under the Superfund Amendments and Reauthorization Act (SARA).

1.2 SITE DESCRIPTION AND HISTORY

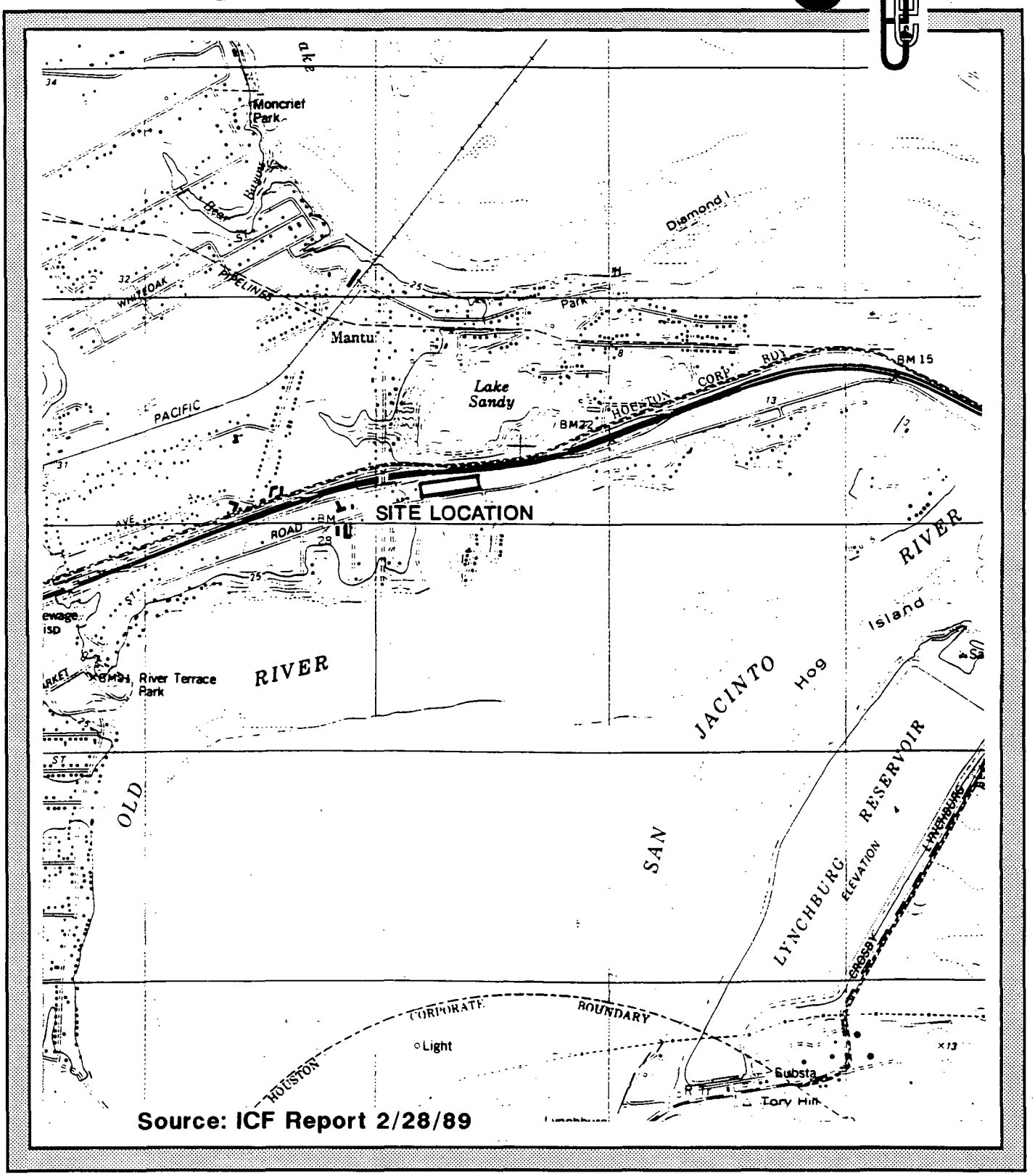
The site is located at 17300 Market Street, near I-10 and Lake Sandy, in Channelview, Texas (1) (Figures 1 and 2). The site originally existed as a low lying area. Solvents allegedly were dumped at the site, but there is no physical evidence to confirm this. The low area was filled with cement flue dust (cement fines resulting from the production of cement). The filled area is approximately 1,000 feet long by 200 feet wide by 8 to 10 feet deep.

The Goodson and Son Trucking facility currently operates at the site (2, p. 1, 6; 3, p. 1; 5, Attachment A).

1.3 SUMMARY OF PRELIMINARY ASSESSMENT

The FIT inspected the site in August 1987 and collected one soil sample from a ditch located adjacent to, and north of, the site. The sample was analyzed for inorganics, cyanides and Base/Neutral/Acid (BNA) organics. The FIT also measured the pH of the water from four locations at the adjacent north and south ditches (2, p. 8, Attachment A, Sampling Results). The FIT sampled the site area more extensively in November 1988 and collected eight soil and eight water samples. The samples were analyzed for inorganics, organics, volatiles, BNAs and pesticides (3, pp. 2-3, Organic and Inorganic Sampling Results).

A buried cable owned by the Southwestern Bell Telephone Company crosses the site at approximately 12 feet under the filled area on the north side. The cable has required frequent maintenance since the area was filled and telephone workers have complained of headaches, burning eyes and respiratory problems when repairing the cable. To alleviate the problem, an underground junction concrete chamber with a manhole was installed before 1985 to gain access to the buried cable. A Southwestern Bell contractor, McLelland Engineers, Inc., investigated the area and drilled three borings and a 19 foot deep monitoring well.



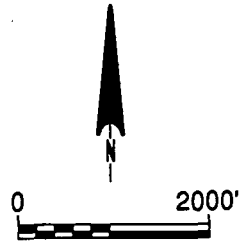
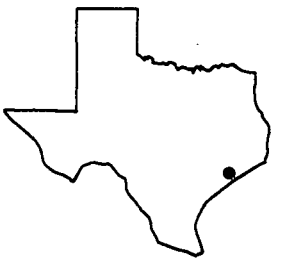


FIGURE 1
SITE LOCATION MAP
GOODSON AND SON TRUCKING
CHANNELVIEW, TEXAS
TXD981052475



Source: ICF Report 11/10/87

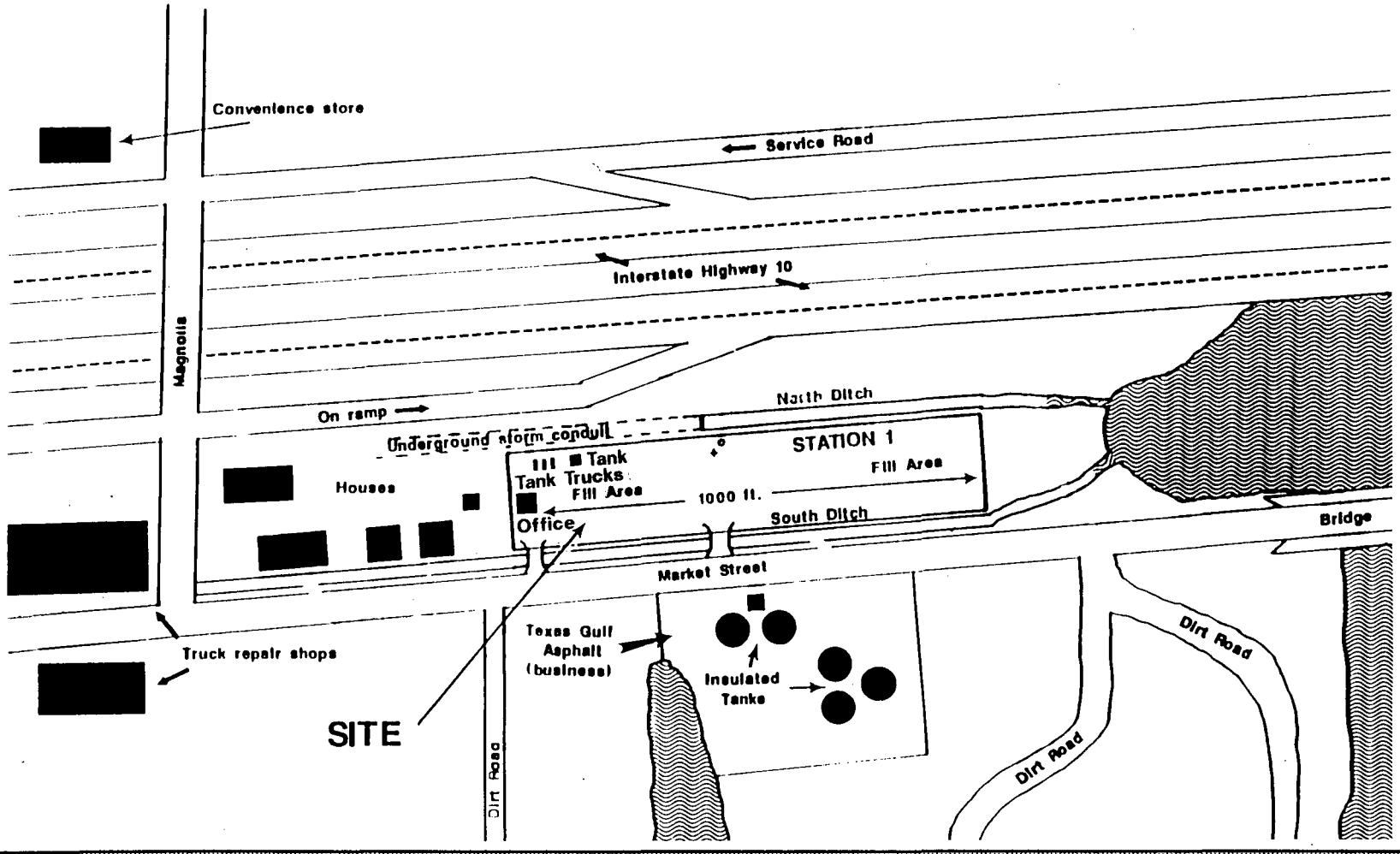


FIGURE 2
SITE SKETCH
GOODSON AND SON TRUCKING
CHANNELVIEW, TEXAS
TXD981052475

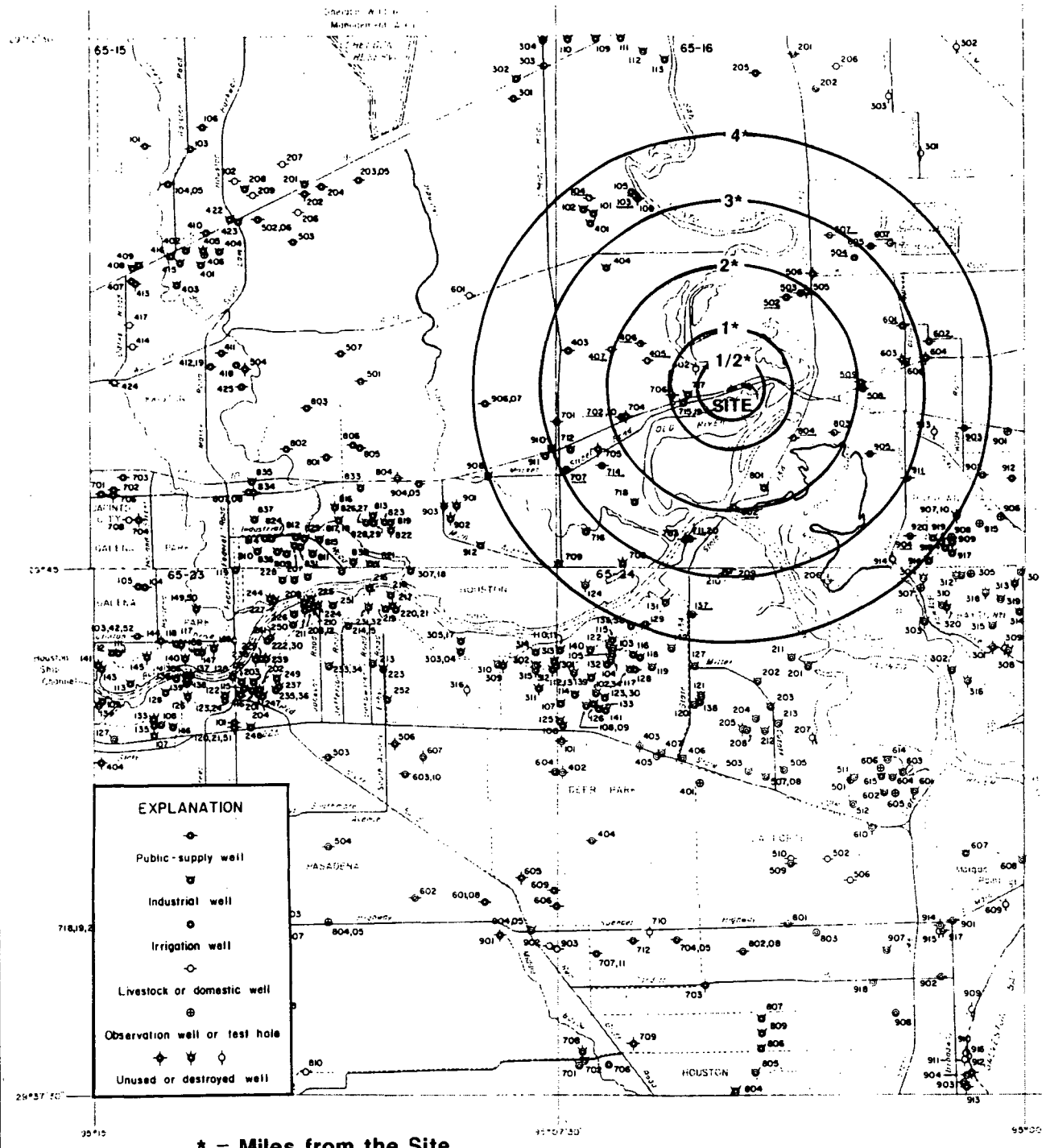


FIGURE 3

LOCATION OF WELLS WITHIN FOUR MILES OF SITE WITHDRAWING WATER FROM THE CHICOT AQUIFER

GOODSON AND SON TRUCKING
CHANNELVIEW, TEXAS
TXD981052475

In 1985, McLelland sampled the well and the adjacent north ditch for pH, conductivity, COD, TOC, carbonates, fluorides, sulfides, calcium, magnesium, sodium, potassium and possibly other metals (5, Attachment A, Table 1, Log of Boring Number B. 3).

The results from the three samplings conducted by the FIT and McLelland Engineers indicated that:

- o high liquid pH values (10-13) were measured from the manhole and from the adjacent north ditch at a location north of the manhole (2, p. 8, Attachment A; 3, Table 1; 5, Attachment A, Table 1)

- o organics (TOC) were detected under the site at the manhole (5, Table 1)

- o the cement dust sample collected on-site was relatively clean. The main components were inorganics, aluminum, calcium, sodium and potassium. Some organics detected at low levels (methylene chloride, acetone, 2-ethylhexyl phthalate and an unknown) appear to be laboratory contaminants. The presence of commercial DDT in this sample at concentrations of .0069 to .033 ppm cannot be attributed to the site and could be related to past pesticide sprayings (3, p. 2-4, Exhibit 2)

- o oily wastes (alkanes) and related polynuclear aromatics (fluoranthene, naphthalene, phenanthrene and 2-methyl naphthalene) were detected in the samples collected by the FIT from the adjacent ditches. Styrene, xylenes, pentachlorophenol and phenol were also detected in these samples

The highest concentration of any of the detected compounds was 6 ppm. A soil sample collected from the north ditch near its entrance to the nearby San Jacinto River cove, and a soil sample collected north of the manhole, were the two most highly contaminated samples (3, pp. 2-4, Exhibit 2).

2. CONCLUSIONS

1. At the present time, it is not known if the site was used for the disposal of hazardous wastes (oily wastes and solvents). The cement powder used to fill the low area cannot be considered hazardous waste based on its corrosivity characteristic. It is not known if its pH is equal, to, or higher than, 12.5. According to the sampling results (3, Exhibit 3) the main constituents of this cement dust (calcium, sodium, potassium and aluminum) are relatively non-hazardous. The quantity of hazardous wastes deposited in the site, if any, is not known. Drilling of borings 6 to 10 feet deep would be necessary to determine if the contamination detected in the adjacent ditches is originating from the site.

2. It appears that the pH values measured in the adjacent ditches are decreasing. Values up to 13.0 were reported in 1985 (2, p. 8, Attachment A). The highest pH value detected by the FIT was 11.7 in 1988 (3, Table 1). The high pH values are localized near the site. The pH measurements from samples of the adjacent north and south ditches near their entrances to the nearby San Jacinto River cove are considerably lower (7.3 to 8.2) (3, Table 1). The distance at the creek from the locations where high pH values were measured, and the nearby San Jacinto River cove, is only 200 feet (1; 2, p. 5).

3. Contamination by alkanes and unknown organics were detected at locations upstream of the site (3, pp. 2-4). Truck repair shops are located near one of the sampled locations.

4. Analysis of the soil sample from the north ditch of the nearby San Jacinto River cove revealed concentrations of alkanes and unknowns (typical of oily wastes) much higher than those detected at the north ditch in front of the site (3, Exhibit 2). This could mean that another source of waste existed downstream of the site.

5. The source of a small amount of DDT on-site and at the south and north ditches (3, Exhibit 2) is unknown. Analysis of a soil sample collected above the storm sewer revealed a small amount of DDT. The sample was otherwise relatively clean (3, Exhibit 2).

6. The site area is dependent upon ground water as a supply source for drinking water. The closest well to the site is located 1.2 miles southeast. Twenty-nine wells are located within a four mile radius of the site. Of the 29, 12 are public distribution wells for Harris County and the City of Baytown. These wells screen water from the lower Chicot Aquifer at depths between 375 and 660 feet. The closest of these wells is located 1.75 miles northeast of the site. Nine public wells are used for a private club, a state park, an inn, an estate and a highway department roadside park. The remaining eight wells are used for private residences, and most of them screen water from the Aquifer at depths between 270 and 440 feet. Water is screened only at a 100 foot depth from a well located three miles northeast of the site (Figure 3) (4; 7).

7. This site did not meet the requirements for inclusion on the National Priorities List (NPL) in the 1988 FIT study (3, p. 1).

8. It does not appear that this site can be considered an NPL site, or a Listing Site Inspection (LSI) candidate, for the following reasons:

- the hazardous wastes quantity assumed in the 1988 study is the "maximum worst case"
- there are no targets for the surface water migration
- no air migration has been detected and it is improbable that an air survey will reveal air contaminants (cement dust) from the site

- unless the pH of the cement dust is equal to or higher than 12.5 (no pH measurements of the cement dust are known), the soil exposure pathway is considered non-existent

On March 28, 1990, EPA Project Manager Debbie Vaughn Wright decided that no further action was needed (6). This report was written to close TDD F06-9001-13.

REFERENCES

1 U.S.G.S. 7.5 Minute Series Topographic Maps. Highlands, TX, 1982. Jacinto City, TX, 1982. La Porte, TX, 1982. Pasadena, TX, 1982.

2 Pierce, Terry, ICF Technology. Potential Hazardous Waste Site Inspection Report. EPA Form T2070-3. November 10, 1987.

3 Carson, Victor, ICF Technology, FIT Chemist. Sampling Inspection for Goodson and Son Trucking, Channelview, TX. February 28, 1989.

4 Texas Water Development Board. Ground Water Data for Harris County, Texas. Volume II. Records of Wells 1892-1972. Report 178. January 1974.

5 Hansen, Mark, ICF Technology. Potential Hazardous Waste Site Identification and Preliminary Assessment. EPA Form T2070-2. June 6, 1987.

6 Record of Communication. To: Debbie Vaughn Wright, EPA Superfund Coordinator. From: Jairo Guevara, FIT Chemical Engineer, EPA Region VI. Re: SSI Reassessment of Goodson and Son Trucking. March 28, 1990.

7 Texas Water Development Board. Data for Harris County, Texas. Volume II. January, 1974.